

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
22 September 2005 (22.09.2005)

PCT

(10) International Publication Number  
**WO 2005/087899 A1**

- (51) International Patent Classification<sup>7</sup>: **C10G 29/20**, C10L 1/22, 1/18
- (21) International Application Number:  
PCT/US2004/004011
- (22) International Filing Date: 11 February 2004 (11.02.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (71) Applicant (for all designated States except US): **BAKER HUGHES INCORPORATED** [US/US]; 3900 Essex Lane, Suite 1200, Houston, TX 77027 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **SCHIELD, John, A.** [US/US]; 9715 Harrison Lane, Missouri City, TX 77459 (US). **CAPPEL, Weldon, John** [US/US]; 9859 Meadow Bend Lane, Houston, TX 77065 (US).
- (74) Agent: **LITTLEFIELD, Steve, A.**; 12645 West Airport Boulevard, Sugar Land, TX 77478 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/087899 A1

(54) Title: HYDROCARBONS HAVING REDUCED LEVELS OF MERCAPTANS AND METHOD AND COMPOSITION USEFUL FOR PREPARING SAME

(57) Abstract: Disclosed is composition useful for reducing the concentration of mercaptans in hydrocarbons comprising: (A) a first diazo component and (B) a second component comprising a nucleophilic acceptor. The composition can be added to hydrocarbons such as fuel oil to reduce mercaptans without increasing turbidity or color. Triethylene diamine and 1,2-epoxyhexadecane are disclosed to be exemplary diazo and nucleophilic acceptor components.